

A REVIEW OF THE SUBGENUS GNATHOSPASTA OF THE GENUS EPICAUTA (MELOIDAE)

By F. G. WERNER¹

The species of *Epicauta* in which the male has a comb, or row of small teeth, on the inner side of the apex of the posterior tibiae form a very distinctive subgenus. The species *E. mimetica* (Horn) falls into this subgenus, and so the generic name *Gnathospasta* proposed by Horn for this species becomes available for the name of the subgenus.

Epicauta (*Gnathospasta*) Horn (NEW COMBINATION)

1875, Trans. American Ent. Soc., 5: 154.

Type of subgenus: *Gnathospasta mimetica* Horn, l.c. (monobasic).

Horn's definition needs revision if *Gnathospasta* is to be used in the sense of the present author. Horn used the elongate mandibles, deeply excised labrum and modified maxillae as the diagnostic features. Only *E. mimetica* (Horn), *labialis* (Dugès) and *E. alpina* Werner show any tendency for this modification of the mouth parts. The present author does not believe this modification to be of great significance. (vid. Werner, 1945, Bull. Museum Comparative Zoology, 95: 423.)

As here redefined, the subgenus *Gnathospasta* includes all of the species of *Epicauta* in which the male has a row of small teeth on the inner side of the apex of the posterior tibiae. (Werner, l.c., fig. 8) The species occurring in the United States and Baja California have already been listed. (Werner, l.c., p. 425, div. AA—*E. atrivittata* should be removed from this division.) Certain other tendencies should be noted. The antennae taper toward the apex and may be slightly flattened; they are never ensiform. The pronotum tends to be campanuliform. Both of these tendencies can be found in other species of *Epicauta* and should not be considered as diagnostic.

On the form of the male antennae certain members of the subgenus were formerly placed in *Macrobasis*, both in the group with segment I straight and in the group with segment I curved and subapically excavated. *Macrobasis* is not available as a subgeneric name because of the designation of *Lytta albida* Say as the genotype by Wellman (1910, Canadian Entomologist, 42: 396). *Epicauta albida* (Say) must fall in the nominate subgenus since it lacks the row of small teeth on the male posterior tibiae.

Except for *E. dohrni* (Haag) and *E. flagellaria* (Er.), which occur

¹ Department of Zoology, University of Vermont

in Colombia, and *E. torsa* (LeC.), which occurs in our Gulf and Atlantic states, the subgenus is confined to the region from Southwestern U. S. to Panama.

Below is an attempt to arrange the known species into species groups. The sharpest division seems to be between the groups with a simple first antennal segment and those in which this segment is excavated externally near the apex. In each division the groups are arranged according to increasing modification of the first two segments of the male antennae and the tendency for the first segment of the male anterior tarsi to be shortened and contorted. Other arrangements attempted, using the modification of the male antennae or anterior tarsi for the first division, seem to bring more diverse elements together.

TABLE OF SPECIES GROUPS

Antennal I not excavated externally near apex, even slightly.

Male anterior tibia with 2 spurs; anterior tarsus I longer than II, straight.

Species from Southwestern U. S. and Northern Mexico TENELLA-GROUP

Species from Colombia and Panama Dohrni-Group

Male anterior tibia with 1 spur (usually none in *E. alastor*)

Antennal II as long as III or shorter.

Male anterior tarsus I as long as II, straight INGRATA-GROUP

Male anterior tarsus I shorter than II, contorted ALASTOR-GROUP

Antennal II longer than III; male anterior tarsus I shorter than II, more or less contorted DIVERSICORNIS-GROUP

Antennal I excavated externally near apex, at least slightly.

Male anterior tibia with 2 spurs; anterior tarsus I as long as II, straight UNIFORMA-GROUP

Male anterior tibia with 1 spur.

Male anterior tarsus I straight, as long as II.

Antennal II as long as III or shorter FUNESTA-GROUP

Antennal II distinctly longer than III.

Male antennal II thick, not flattened TORSAL-GROUP

Male antennal II with a tendency for antero-posterior flattening PURPUREA-GROUP

Male anterior tarsus I shorter than II, more or less contorted

Antennal II as long as III or shorter.

Male anterior tarsus I compressed, only slightly modified VIRGULATA-GROUP

Male anterior tarsus I strongly contorted; male anterior tibia with a tuft of erect pubescence at the outside of the base ----- OCHREA-GROUP

Antennal II distinctly longer than III ----- DISPARILIS-GROUP

LIST OF SPECIES

- | | |
|---|---------------------------------|
| Tenella-Group | <i>stigmata</i> (Dugès) |
| <i>tenella</i> (Lec.) | <i>melanochroa</i> Wellm. |
| <i>merkeliana</i> Horn—possible synonym of <i>tenella</i> . | = <i>nigra</i> Dugès nec Woodh. |
| | <i>leoni</i> Dugès |
| | <i>tripartita</i> Champ. |
| Dohrni-Group | <i>atricolor</i> Champ. |
| <i>dohrni</i> (Haag) | <i>niveolineata</i> (Haag) |
| = <i>bimaculosa</i> (Kirsch) | <i>mimetica</i> (Horn) |
| = <i>bogotensis</i> Pic | <i>labialis</i> (Dugès) |
| | Funesta-Group |
| Ingrata-Group | <i>funesta</i> (Chevr.) |
| <i>ingrata</i> Fall | <i>punctum</i> (Dugès) |
| | <i>cinereiventris</i> Champ. |
| Alastor-Group | <i>atripilis</i> Champ. |
| <i>alastor</i> Skinner | <i>pacifica</i> Mayd. |
| | <i>croceicincta</i> (Dugès) |
| Diversicornis-Group | Torsa-Group |
| <i>lauta</i> (Horn) | <i>torsa</i> (Lec.) |
| = <i>compressicollis</i> Champ. | |
| = <i>macroflexi</i> Dillon (NEW SYNONYMY) | Purpurea-Group |
| ssp. <i>rossi</i> Werner | <i>purpurea</i> (Horn) |
| <i>tenuicornis</i> (Champ.) | <i>distorta</i> (Champ.) |
| <i>humeralis</i> (Dugès) | <i>maculifera</i> (Mayd.) |
| <i>polingi</i> Werner | |
| <i>arizonica</i> Werner | Virgulata-Group |
| <i>liebecki</i> Werner | <i>virgulata</i> (Lec.) |
| <i>forticornis</i> (Haag) | <i>hirsutipubescens</i> (Mayd.) |
| <i>diversicornis</i> (Haag) | <i>linearis</i> (Lec.) |
| = <i>flavens</i> (Dugès) | |
| <i>candèzi</i> (Haag) | Ochrea-Group |
| <i>beckeri</i> (Dugès) | <i>ochrea</i> (Lec.) |
| <i>isthmica</i> Werner | = <i>protarsalis</i> (Dugès) |
| <i>flagellaria</i> (Er.) | = <i>moniliformis</i> Dillon |
| = <i>intermedia</i> (Haag) | <i>gissleri</i> (Horn) |
| | <i>parkeri</i> Werner |
| Uniforma-Group | Disparilis-Group |
| <i>uniforma</i> Werner | <i>disparilis</i> (Champ.) |
| <i>alpina</i> Werner | |